

3 Phase Medium Voltage Capacitors



GENERAL : AVAILAIBLE IN ...

- 2400, 4160, 4800 VOLTS
- 3300, 6600 AND 6900 VOLTS
- 50, 60 HZ

HVCB SERIES (BARE UNIT)

- 25 KVAR TO 450 KVAR

HVCE SERIES (TOP ENCLOSURE)

- 25 KVAR TO 1200 KVAR

Externally Fused Design

High voltage power capacitors are designed by using latest technology. They have all-film dielectric and are impregnated with dielectric liquid which is environmentally safe and contains no chlorine atoms. In addition, each capacitor is provided with an internal discharge resistor.

All capacitors have low losses, and are constructed to be light in weight. The high voltage power capacitors comply with most national and international capacitor standards.

- The capacitor units are equipped with tree bushings.
- Capacitor containers are made of stainless steel and painted with suitable primer coat prior to finish coat to ensure prolonged durability.
- Capacitors for specific purposes can be designed and manufactured to meet customers' requirements.

TECHNICAL DATA - HVCB - HVCE series

• Rated Voltage / Phase	2400 to 6900 Volts / 3 phases
• Rated Frequency	50Hz or 60Hz
• Rated Power	50 to 720 kVAR / unit
• Insulation level	60, 75, 95 kV BIL
• Power losses	0.5 W/kVAR
• Continuous overvoltage	110 %
• Continuous overcurrent	135 %
• Mounting type	Floor mounting
• Enclosure type HVCB	Indoor
• HVCE (option)	Outdoor
• Temperature class	-40 °C to 55 °C
• Average 24h :	+ 45 °C
• Color	ASA 61 (light grey)
• Construction Standard	UL, CSA, IEC

2400 Volts		HVC_ series		Dwg =		Option		SK-6031	SK-6032
Kvar	Style	Basic cat. #	Type 1, 12, 3R	No Fuse	3 Fuses	BFI	Style	SK-6031 HVCE	SK-6032 HVCE
* E.F.D	+ -->	Suffix	Suffix	Suffix	Suffix	Suffix	Fig. #	Fig. #	Fig. #
25	HVC_	31167	-	-	F	BFI	1	2	2
50	HVC_	31168	-	-	F	BFI	1	2	2
75	HVC_	31169	-	-	F	BFI	1	2	2
100	HVC_	31170	-	-	F	BFI	1	2	2
125	HVC_	31171	-	-	F	BFI	1	2	2
150	HVC_	31172	-	-	F	BFI	1	2	2
175	HVC_	31173	-	-	F	BFI	1	2	2
200	HVC_	31174	-	-	F	BFI	1	2	2
225	HVC_	31316	-	-	F	BFI	1	2	2
250	HVC_	31317	-	-	F	BFI	1	2	2
275	HVC_	31318	-	-	F	BFI	1	2	2
300	HVC_	2-31172	1	-	F	BFI	-	2	2
400	HVCE	2-31174	1	-	F	BFI	-	3	3
500	HVCE	2-31317	1	-	F	BFI	-	3	3
550	HVCE	2-31318	1	-	F	BFI	-	3	3
***				-					
750	HVCE	3-31317	1	-	F	BFI	-	3	3
825	HVCE	3-31318	1	-	F	BFI	-	4	4

4160 Volts		HVC_ Series		Dwg #		Option		SK-6029	SK-6030
Kvar	Style	Basic cat. #	Type 1, 12, 3R	No Fuse	3 Fuses	BFI	Style	SK-6029 HVCE	SK-6030 HVCE
* E.F.D	+ -->	Suffix	Suffix	Suffix	Suffix	Suffix	Fig #	Fig #	Fig #
25	HVC_	31151	-	-	F	BFI	1	2	2
50	HVC_	31152	-	-	F	BFI	1	2	2
75	HVC_	31153	-	-	F	BFI	1	2	2
100	HVC_	31154	-	-	F	BFI	1	2	2
125	HVC_	31155	-	-	F	BFI	1	2	2
150	HVC_	31156	-	-	F	BFI	1	2	2
175	HVC_	31157	-	-	F	BFI	1	2	2
200	HVC_	31158	-	-	F	BFI	1	2	2
225	HVC_	31319	-	-	F	BFI	1	2	2
250	HVC_	31320	-	-	F	BFI	1	2	2
275	HVC_	31321	-	-	F	BFI	1	2	2
300	HVC_	31322	-	-	F	BFI	1	2	2
400	HVCE	2-31158	1	-	F	BFI	-	3	3
500	HVCE	2-31320	1	-	F	BFI	-	3	3
600	HVCE	2-31322	1	-	F	BFI	-	3	3
750	HVCE	3-31320	1	-	F	BFI	-	4	4
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900	HVCE	3-31322	1	-	F	BFI	-	4	4

Part	1	2	3	4	5
No ...	HVCE	31151	12	-	F BFI

Others Voltage class contact factory.

Dust-tight Type HVCE-12

Weatherproof Type HVCE-3R

General Purpose Type HVCE-1

TYPE HVCE and HVCB

Indoor and outdoor high voltage industrial capacitor assemblies with type ALL-FILM polypropylene low loss film capacitor units are designed for use on primary circuits where limited amounts of kVARc are required. They can be installed directly at the motor terminal or at load centres to improve power factor. When applied on the load side of a motor starter, a separate switch is not required resulting in a low installed cost per kVARc. Each 3 phase unit is individually fused with 2 or 3 current limiting fuses and is supplied with floor mounting brackets.

High Voltage Type Dielectric Assembly :

Individual sections consisting of aluminum foil sheets separated by sheets of (textured) polypropylene film insulation are impregnated with all-temperature NON,PCB the unique biodegradable liquid dielectric which in combination with other developments results in a capacitor capable of efficient reliable operation over the entire range of ambient temperatures from -40°C (58°F) to +45°C (+115°F). The ALL-FILM design offers improved performance over the previous mixed dielectric design. Operating losses have been reduced to 0.20 watts per kVA in an ambient of 25°C. This results in lower operating temperatures and longer life. Extensive testing has confirmed that the low temperature switching characteristics are equal to or better than earlier designs.

Enclosure type :

Indoor and Outdoor 3 phases units 2400 V. and above have heavy gauge stainless steel cases which eliminate the need for protective repainting. A two coat finish of ASA-70 light grey lacquer on all voltage ratings aids heat dissipation and provides a pleasing appearance. All units are available in NEMA 1, 12, 3R.

Discharge resistors:

Power capacitors contain internal discharge resistors as a safety feature to discharge the capacitor when de-energized.

For units below 2400 volts the residual voltage is reduced to 50 volts crest in less than one minute after the unit has been disconnected from the circuit. For units 2400 volts and above, the residual voltage is reduced to 50 volts crest in less than 5 minutes.

Terminal connectors:

Clamp type terminals supplied on high voltage Type HVCE, HVCB units accommodate # 10 to #4 awg and permit connection without additional hardware.

Mounting:

High voltage Type HVCE and HVCB units have strong stainless steel mounting brackets projection welded to opposite ends of the case for base mounting.

HVCE



HVCB



➤ Technical Data *HVCE series c/w Current Limiting Fuses*

Standard Features and Options :	1 Units Ass.	2 Units Ass.	3 Units Ass.	4 Units Ass.
Enclosure floor mounted c/w lifting ring (Type 1, 12, 3R,) 4X on request	1,3R, 12	1,3R, 12	1,3R, 12	1,3R, 12
Metal top Enclose for x Unit(s)	1	2	3	4
ASA 61 Grey (other color on request)	■	■	■	■
Bottom or Side Cable entry	■	■	■	■
Capacitors size / KVAR max / Unit (Custom Staging Ratios)	25 - 300 kVAR			
Incoming silver Flash Copper Bus 60 kV BIL c/w mechanical lugs	■	■	■	■
System Voltage / Voltage class	5 kV	5 kV	5 kV	5 kV
Insulation Class ... BIL	60 kV	60 kV	60 kV	60 kV
Current limiting fuses HRC type ____ Amp. 60 ka				
Number fuses (Totals)	3	6	9	12
Optional (s)				
BFI - Current limiting fuses	O	O	O	O
Blown fuses indicating light c/w push bottom test	O	O	O	O
Damping reactor c/w thermal detection device	O	O	O	O
Special Metering Arrangement	O	O	O	O

■ Standard O = Optional

➤ HVCE - Top Enclose configuration

! HVCE equipment is suitable for use on indoor or outdoor primary circuits where kVAR is required. They may be installed at various load centers or directly at the terminals of 2400, 4160 and 4800 volt motors. Units up to 1200 kVAR are available.

Permissible ambient temperatures are -40°C to +40°C. Discharge resistors included reduce voltage to 50 volts or less with in 5 minutes of de-energization.

